REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 9 and 12 are cancelled. Claims 4, 5, 8, 10, 11 and 13 are amended. Claims 1-8, 10, 11 and 13-27 are pending.

I.   **Objection to the Claims**

In the Office Action, at page 2, numbered paragraph 2, claims 5 and 6 were objected to. Claim 5 was amended in light of the Examiner's comments, and accordingly, withdrawal of the objection to the claims is respectfully requested.

II.   **Rejection under 35 U.S.C. § 101**

In the Office Action, at page 2, numbered paragraph 3, claims 8-13 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Claims 9 and 12 were cancelled. Claims 8, 10, 11 and 13 were amended in light of the Examiner's comments, and accordingly, withdrawal of the § 101 rejection is respectfully requested.

III.   **Rejection under 35 U.S.C. § 102**

In the Office Action, at page 4, numbered paragraph 5, claims 1-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Publication No. 2002/0067704 to Ton. Claims 9 and 12 were cancelled. This rejection is respectfully traversed because Ton does not discuss or suggest:

> transmitting a binding update (BU) message, containing an identifier that indicates whether there is a request for slave home agent information, to a master home agent, in a mobile IPv6 environment,
>
> wherein the slave home agent information is information on a slave home agent that neighbors the master home agent,

as recited in independent claim 1.

Ton discusses a method for ensuring reliable mobile IP service in which a mobile node attempts to register with its primary home agent, HA1, by sending a Mobile IP RRQ to HA1, which will process the Mobile IP RRQ and accept or reject the Mobile IP RRQ. If HA1 accepts the RRQ, it will add a mobility binding, establish a tunnel between the foreign agent FA and HA1

and send a Mobile IP RRP with a new Mobile IP Alternate NA extension containing alternate HA IP addresses, for example, the IP address of HA2. The mobile node MN receives the RRP and the new Mobile IP Alternative HA extension indicating that it is registered with the primary HA and it stores the list of alternative HAs. The MN sends a Re-registration request to HA1. If the primary HA, HA1, fails, the FA will return a Mobile IP RRP with an error code and the MN then uses one of the configured alternate HAs, i.e., HA2, in its next RRQ, which is then forwarded to HA2.

First, Ton transmits an RRP between the foreign agent FA and a home agent HA. In contrast, the present invention transmits a binding update (BU) message and a binding acknowledgement message between a mobile node and a master home agent. Ton does not discuss or suggest requesting slave home agent information and <u>receiving</u> the slave home agent information using the binding update message and the binding acknowledgement message. Thus, as Ton does not discuss that slave home agent information is received, Ton can not discuss that a binding update (BU) message can contain an identifier <u>that indicates **whether there is a request for·slave home agent information**</u>.

While Ton does discuss that HA1 sends a Mobile IP RRP with the alternate HA IP addresses, i.e., the IP address of HA2, Ton does not discuss or suggest that the MN sends a binding update message that contains <u>an identifier that indicates whether there is a request for slave home agent information</u>. The Examiner alleges that sending a Mobile IP RRQ inherently has an indicator that indicates whether or not the sender of the message desires an acknowledgement or not. The Applicants respectfully disagree with this interpretation.

In particular, while the message sent by the MN may include an indicator that indicates whether or not the sender of the message desires an acknowledgement, Ton does not specifically discuss or suggest that the RRP which is sent by the MN includes an indicator particularly as to <u>whether there is a request for slave home agent information</u>. Ton includes no discussion at all, nor is it inherent in a RRQ sent from a mobile node MN that a registration request includes an indicator as to whether there is a request for slave home agent information. A request for an acknowledgement from a home agent is different from a request for <u>slave home agent information</u>. Further, Ton includes no discussion at all that the RRQ includes a request for slave home agent information.

Additionally, Ton appears to suggest that every time a HA1 accepts a Mobile IP RRQ, it will send a Mobile IP RRP which will include a new Mobile IP Alternate HA extension, i.e., the IP address of HA2. There is no indication in Ton that the HA1 sends a RRP which includes the IP

address of HA2 <u>upon receipt of a request for such information</u>, but indicates that, if the HA1 accepts the RRQ, the HA1 will always send the additional alternate HA IP addresses, for example, the IP address of HA2. In contrast, the present invention discusses that the binding update message that is transmitted contains an identifier as to whether there is a request for slave home agent information. Claim 2 of the present invention particularly recites that if an identifier is set to "1", the identifier indicates that there is a request for the slave home agent information, and if the identifier is set to "0", the identifier indicates that there is <u>no</u> request for the slave home agent information. Ton does not appear to distinguish between an identifier that addresses whether there is a request for the slave home agent information and whether there is <u>not</u> a request for the slave home agent information. Therefore, the HA1 that accepts the RRQ in Ton appears to send the alternate HA IP addresses regardless of whether the RRQ specifically requests the alternate addresses or not, which may result in additional information being transmitted across the network.

In addition, while Ton discusses that the alternate HA IP addresses are other HAs in the network, Ton does not explicitly suggest that the alternate HAs are slave home agents <u>that neighbor the master home agent</u>, here, HA1. There is no discussion in Ton that, for example, HA2 is a neighbor to HA1. Thus, Ton does not discuss or suggest that slave home agent information is particularly information on a slave home agent that neighbors a master home agent to which the binding update message is transmitted.

Therefore, as Ton does not discuss or suggest "transmitting a binding update (BU) message, containing an identifier that indicates whether there is a request for slave home agent information, to a master home agent, in a mobile IPv6 environment, wherein the slave home agent information is information on a slave home agent that neighbors the master home agent," as recited in independent claim 1, claim 1 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Further, Ton does not discuss or suggest "transmitting a binding acknowledgement (BACK) message, <u>after receiving a binding update (BU) message containing an identifier that indicates whether there is a request for slave home agent information</u>, containing slave home agent information, to a mobile node, in a mobile IPv6 environment," as recited in amended independent claim 4. Therefore, claim 4 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

In addition, Ton does not discuss or suggest "a binding update (BU) message in a mobile IPv6 environment, containing an identifier that indicates whether there is a request for slave

home agent information, wherein the slave home agent information is information on a slave home agent that neighbors a master home agent that receives the BU message," as recited in amended independent claim 8. Therefore, claim 8 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Ton also does not discuss or suggest "a binding acknowledgement (BACK) message in a mobile IPv6 environment, the BACK message containing slave home agent information being transmitted after receiving a binding update (BU) message containing an identifier that indicates whether there is a request for slave home agent information," as recited in amended independent claim 10. Therefore, claim 10 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Additionally, Ton does not discuss or suggest "a BU message transmission unit that transmits a BU message, containing an identifier that indicates whether there is a request for slave home agent information, to a master home agent;..." as recited in independent claim 14. Therefore, claim 14 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Further, Ton does not discuss or suggest "a BU message reception unit that receives a BU message, containing an identifier that indicates whether there is a request for slave home agent information, from a mobile node; a slave home agent information transmission determination unit that determines **whether** to transmit the slave home agent information, requested by the mobile node, to the mobile node; [and] a binding acknowledgement (BACK) message generation unit which generates a BACK message, containing the slave home agent information, if the slave home agent information transmission determination unit determines to transmit the slave home agent information, and generates an ordinary BACK message if the slave home agent information transmission determination unit determines not to transmit the slave home agent information," as recited in independent claim 15. Therefore, claim 15 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Also, Ton does not discuss or suggest "inserting a slave home agent address information request into a first binding update (BU) message; and transmitting the first BU message to a master home agent," as recited in independent claim 16. Therefore, claim 16 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

Claims 2, 3, 5-7, 9, 11-13 and 17-24 depend either directly or indirectly from independent claims 1, 4, 8, 10 and 16 and include all the features of their respective independent claims, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 5 recites that "the slave home agent information comprises: an identifier that indicates whether the slave home agent information will be transmitted; the-a number of slave home agents; and at least one slave home agent address." Therefore, claims 2, 3, 5-7, 9, 11-13 and 17-24 patentably distinguish over the reference relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

IV. Rejection under 35 U.S.C. § 103

In the Office Action, at page 13, numbered paragraph 13, claims 25-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ton. This rejection is respectfully traversed.

As discussed above with respect to independent claim 16, Ton does not discuss or suggest "inserting a slave home agent address information request into a first binding update (BU) message". Claims 25-27 depend either directly or indirectly from independent claim 16 and include all the features of claim 16, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 25 recites that "the BACK message further comprises a home agent address field to indicate addresses of the candidate slave home agents, which are arranged in a predetermined order according to corresponding priority levels." Therefore, claims 25-27 patentably distinguish over the reference relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

Conclusion

In accordance with the foregoing, claims 9 and 12 have been cancelled. Claims 4, 5 and 8-13 have been amended. Claims 1-8, 10, 11 and 13-27 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: __10/22/07__   By: _____

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